Avaya Video Communications Systems Installation Guide

February 2011

Avaya 1050
Avaya 1040
Avaya 1030

Preparing for Installation

As you prepare to install your Avaya video communications system, consider the physical conditions of the room, compatibility with displays and your network configuration and settings. Related documentation is available fromhttp://www.avaya.com/support.

Before You Install

If you are not using DHCP, you may need guidance from your network administrator to complete the initial configuration. You will need to manually set an IP address, subnet mask, and default gateway for your Avaya system.

Network Bandwidth

Poor audio and video quality may result from insufficient bandwidth on your network. Avaya recommends that your network be capable of at least 1 Mb/s (incoming and outgoing) for a high definition video call. During video calls with lower bandwidths, Avaya systems automatically select the best resolution that can be achieved with the available bandwidth.

Room Configuration

The size, shape, layout and occupancy of the room dictate where you place your video conferencing components. For example, in a multi-user conference room, place an Avaya Video MicPod 1000 or Avaya Video Conference Phone 1000 at the center of the group of participants.

You can lock the Avaya codec with a secure loop to prevent physical removal of the device.

WARNING	Avoid routing cables from the codec across foot-traffic areas. Tripping on the cables can cause both personal injury and permanent damage to the connectors in the cables and the codec itself.

The lighting in your environment affects image quality. The optimal lighting for Avaya systems is 300 to 500 LUX. If light levels are too low, consider adding artificial light. Indirect light from shaded sources or reflected light from pale walls often produces excellent results. Avoid the following:

- direct sunlight on the subject matter, the background, or the camera lens
- direct illumination of the subject matter and camera lens
- colored lighting
- harsh side lighting or strong light from above

System Components

Your package contains the following components:

- One of the following audio components:
  - Avaya Video Conference Phone 1000
  - Avaya Video MicPod 1000
- Avaya Video Camera 300 with power supply and standard 3-meter (9.8 foot) HDMI cable
- Codec, stand (Avaya 1050 and Avaya 1040 only), and power supply
- Avaya remote control, including three AAA batteries
- Quick reference card
- Documentation CD
- Standard cable kit

You can substitute cables of longer lengths with the following limits:

- HDMI: 15 meters (49 feet)
- Ethernet: 100 meters (328 feet)

Installing Your System

Before you install your system, read the *Avaya Safety and Regulatory Notices* for important safety information.

WARNING Exercise care when connecting cables to the codec. Face the back of the codec or ensure that all connectors are visible when connecting a cable to the codec.

To install your Avaya system, remove all components from the product packaging and place them in the desired positions in your conference room or office.

WARNING Do not place anything on top of or adjacent to the codec that can obstruct air flow around the unit or generate heat. Doing so can cause the system to overheat and reboot. Prolonged overheating can result in damage to the codec. Make sure the room that houses the codec is properly ventilated and temperature controlled.

Optional, for Avaya 1050 and Avaya 1040 only: Insert the codec into its stand by aligning the pin holes at the base. Secure the codec by tightening the bolt on the bottom of the stand. *Optional:* Insert the rubber feet on the bottom of the codec stand.

WARNING Use the stand and bolt included in the product box. Using a stand and bolt from another Avaya model can damage the codec.

When using the stand, Avaya recommends that you route at a minimum the thicker cables (DVI and HDMI) through the plastic strain relief guide on the stand to enhance the stability of the codec and prevent tipping. You can also remove the stand and lay the codec flat to improve stability.

Refer to the quick reference card included with your system for a visual depiction of the proper setup. The numbers that appear on the quick reference card correspond to the following steps:

1. Open the battery compartment on the back of the remote control.
   a. Before inserting the batteries, stretch each of the two straps across the outer battery slot closest to to the battery.
   b. Insert the two outer batteries, negative end (-) first against the spring, and press the positive (+) end into place, thus trapping the cloth straps beneath the batteries.
   c. Lay the longer cloth strap over both batteries and insert the center battery's negative end against the spring to trap the longer cloth strap beneath it. Press the positive end of the battery into place.
   d. Lay the ends of the cloth straps over the center battery and install the cover.
2. To connect your Avaya camera to the codec, insert the HDMI cable into the HD port on the camera and plug the opposite end into the appropriate port on the codec:
   - Avaya 1050 and Avaya 1040: HD in 1 HD 1 port
   - Avaya 1030: HD in HD port

   Insert the power adapter cable into the power port on the back of the camera and plug the power adapter into a power outlet.

   Optionally install the glare visor, using the notches on the lens barrel to guide the visor into its correct position. Use the visor only if it is needed to improve the image in your environment.

CAUTION Do not attempt to pick up the camera by the glare visor as it may pull loose and subject the camera to damage or destruction from a fall.

3. Insert the HDMI display cable into the port on the rear of your display and the opposite end into the Display 1 HD 1 port. (If you are using Avaya 1050 or Avaya 1040 with a stand, Avaya recommends you route this cable through the strain relief guide on the stand.) Insert the display power cord into a power outlet. To connect a second display, refer to Configuring a Second Display.

NOTE Avaya 1030: If you plan to use external speakers that are not built into the display, connect the speakers to the port marked with the line out symbol on the back of the codec.

4. Insert the network cable into the network port marked with the LAN symbol on the back of the codec. Insert the opposite end of the network cable into a network port on the wall.
5. Do one of the following:
   a. If you are using the Avaya Video Conference Phone 1000 for audio, insert the phone cable into the port marked with the LAN symbol on the underside of the phone.

NOTE The exterior port marked with the symbol on the Avaya Video Conference Phone 1000 is reserved for future use.

Insert the opposite end of the phone cable into the port marked with the Avaya Video Conference Phone 1000 symbol on the back of the codec. Ensure the cables are secured into the guides to avoid damage to the cables.

NOTE When the Avaya Video Conference Phone 1000 is connected to an Avaya system, you cannot configure it as a standalone speakerphone. Configure your system using the system interface.

   b. If you are using a single Avaya Video MicPod 1000 for audio, insert the end of the cable from the Avaya Video MicPod 1000 into the microphone port marked with the microphone symbol on the back of the codec. If you are using Avaya 1050 or Avaya 1040 with a stand, Avaya recommends you route this cable through the strain relief guide on the stand. Optionally, you can add an Avaya Video MicPod 1000 extension cable (not included) to the Avaya Video MicPod 1000. The extension cable is 15 meters, 49.2 feet and Avaya recommends using no more than one extension cable.

WARNING Avaya recommends that you use the cable strain relief clip included with Avaya Video MicPod 1000 as described in Attaching the Avaya Video MicPod 1000 Strain Relief Clip.

If you are using dual Avaya Video MicPod 1000s for audio, refer to Configuring Dual Avaya Video MicPod 1000s.

6. Insert the cord from the power adapter into the power outlet marked DC 19V ⎓ on the back of the codec (near the base). Insert one end of the power cord into the power adapter and the opposite end into a power outlet on the wall. See Status Icons for more information about the state of the system as it boots or as conditions change.

   The Avaya system starts and illuminates a blue LED on the front of the codec. The system status bar at the bottom of the screen indicates system and network status. When the system is booting, status also appears at the top of the **REDIAL** list to indicate the current state of the system.

   The Avaya system starts and illuminates a blue LED on the front of the codec.

   The camera initializes the first time it is connected to a codec. This process takes approximately 90 seconds.

   WARNING Do not disturb or disconnect the devices during this time as you may damage the system.

7. An **Initial Configuration** screen prompts you to configure the system. Refer to the *Avaya Video Communications Systems User and Administrator Guide* to complete the initial configuration. If the initial configuration screen does not appear and the display is blank, refer to Troubleshooting Installation Issues.

Placement Behind a Firewall

Refer to the *Avaya Video Communications Systems User and Administrator Guide* for information about configuring the system for firewall traversal.

Supported Display Types and Resolutions

Avaya video systems connect to HD displays (720p minimum), including:

- plasma, LCD, and LED flat panel displays
- large screen rear projection TV displays (720p/1080p displays)
- front projection displays
- rear projector A/V room configurations

Supported display resolutions include the following:

Display 1	1280 x 720p60 1280 x 768p60 1920 x 1080p30 1920 x 1080i60
Display 2	1280 x 720p60 1280 x 768p60 (*Avaya 1050 and Avaya 1040 only*) 1920 x 1080p30 1920 x 1080i60

The primary output defaults to 720p60 and will work with any 720p HD display. Learn how to change the resolution for 1080 HD displays in Changing Display Resolution.

Avaya recommends using a dual display configuration for presentations.

NOTE The **Display 1 Resolution** and **Display 2 Resolution** preferences in **Appearance : Displays** default to *Auto* if you select an option for these preferences that the connected display does not support. If the resolutions are not the same, Display 2 will be limited to displaying presentations and will not be able to mirror the primary display or display calls. For more information, see Configuring a Second Display.

Changing Display Resolution

The primary output defaults to 720p60 and will work with any 720p HD display.

To change the display resolution, navigate to **Administrator Preferences : Appearance : Displays** and choose **Display 1 Resolution**. You can change the resolution to 1920x1080i60 or 1920x1080p30 and it will work with most 1080 HD displays. Some 1080p displays will not work with 1080p30 mode and the display may be blank. In this case you must configure the display resolution from either the Avaya Video Conference Phone 1000 (refer to Blank or Distorted Display) or from the web administration interface. Avaya recommends that before you change the display resolution to 1920x1080p30, ensure that you can access the **Display 1 Resolution** preference using one of these methods.

Configuring a Second Display

To connect a second display, insert the video display cable into the port on the rear of your display and the opposite end into the Display 2 HD 2 port on the codec. (If you are using Avaya 1050 or Avaya 1040 with a stand, Avaya recommends you route this cable through the strain relief guide on the stand.) Attach the display power cord to a power outlet. By default, the second display is blank.

Navigate to **Appearance : Layout** and choose **Display 2 Layout**, which by default is set to *None*.

- Choose *Presentations + DVI-I Input* to display presentations (local and remote) during a call that is sending or receiving a presentation. When not in a call, background image appears in the display.
- Choose *Calls + Presentations + DVI-I Input* to display:
  - video images from video calls
  - presentations (local and remote) in a call that is sending or receiving a presentation
  - background image when not in a call
- Choose *Simulcast Calls + DVI-I Input* to show the same output on Display 2 as shown on Display 1 during calls.

If you use a VGA projector as Display 2, navigate to **Administrator Preferences : Appearance : Displays** and choose **Display 2 Resolution**. Configure its resolution to 1280 x 768 to match the default HD configuration of Display 1.

NOTE To use the *Calls + Presentations + DVI-I Input* or *Simulcast Calls + DVI-I Input* options, you must set Display 1 and Display 2 to the same resolution; otherwise, you will see a warning message and this option will be forced to *Presentations + DVI-I Input.*

The following conditions apply when using two displays with Avaya 1030:

- The presentation icon that appears on screen during a call to indicate that a near or far end presentation is in progress appears in Display 1 above. For a presentation sent from a far end participant, the receiving presentation icon appears in the upper-left corner of Display 1; for a presentation sent from the near end, the sending presentation icon appears in the lower-right corner of Display 1.
- If you choose *Calls + Presentations + DVI-I Input* or *Simulcast Calls + DVI-I Input* for the **Display 2 Layout** preference, the following status icons and information do not appear in video images in the second display during calls:
  - caller ID information and call type (voice or video) icons
  - camera selection icons

    NOTE Selecting a camera to control by pressing the near/far camera button on the remote control during a call shows no indication of which participant's camera is selected if the participant's video image appears only in the second display.

  - encryption icons
  - mute icon
- Only presentation video or DVI-I input is supported for Display 2. Background image and color preferences that appear in **Appearance : Backgrounds** are available for Display 1 only. The user interface appears only in Display 1.
- When the logo screen saver is active on the primary display, the second display shows the background image instead of the screen saver.

Optional Peripherals

You can connect the following optional peripherals to enhance your Avaya system:

Peripheral	Supported Systems	Usage
Audio In (Line In) 1 Audio In (Line In) 2	Line In - All systems Line In 2 - Avaya 1050 and Avaya 1040	With an external line level audio input.
Audio Out (Line Out)	All systems	With external line level output speakers that are not built into display 1 or with a headset (left plus right). **Warning**: Excessive sound pressure from earphones and headphones can cause hearing loss.
Auxiliary Video In	Avaya 1050	For inputting component, S-video or composite video. Only one can be used at a time. A component source always takes precedence. If S-video and composite sources are both plugged in, the S-video source takes precedence. Auxiliary Video In is typically used to connect a DVD or VCR to share standard video content with the far end during a presentation or to view the content locally.
DVI-I In (PC in)	All systems	With devices and laptops for presentations or to share PC data. Accepts both digital video and VGA analog signals with the proper adapter cable. For devices and PCs with VGA output, Avaya includes a DVI-A to VGA cable. An HDMI source can be used with an adapter.
HD Camera	Avaya 1050 Avaya 1040	With an Avaya firewire camera.
HD in 2	Avaya 1050	With a second Avaya HDMI camera.
Serial RS-232	Avaya 1050	With supported third-party cameras using VISCA control or for automation control with Crestron or AMX controllers.
USB port	All systems	Used for USB to serial adapters.

Configuring Dual Avaya Video MicPod 1000s

In a dual Avaya Video MicPod 1000 configuration, you use a combination of two Avaya Video MicPod 1000s, one splitter cable, and extension cables in large rooms for maximum omnidirectional audio coverage.

You cannot use multiple splitters to connect to more than two Avaya Video MicPod 1000s; however, you can use variations on three configurations of extension cables:

- If you connect the male end of the splitter directly to the codec, you can use none, or one extension cable to connect an Avaya Video MicPod 1000 to each of the female ends of the splitter.

- If you use one extension cable to connect the codec to the splitter, you can use none, or one extension cable to connect an Avaya Video MicPod 1000 to each of the female ends of the splitter.
- If you use two extension cables to connect the codec to the splitter, you must connect both Avaya Video MicPod 1000s directly to the female ends of the splitter.

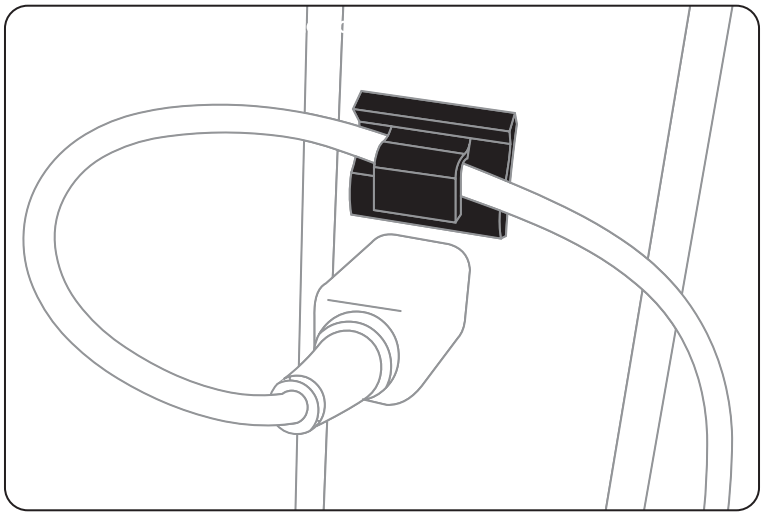
WARNING Avaya recommends that you use the cable strain relief clip included in the Avaya Video MicPod 1000 product box as described in Attaching the Avaya Video MicPod 1000 Strain Relief Clip to avoid personal injury or damage to the unit.

An Avaya codec detects any splitter or cable attached to the microphone input of the codec as an Avaya Video MicPod 1000. If an Avaya Video MicPod 1000 is not attached to the extension or splitter cable and the microphone input is selected as the active microphone, no audio is available. The indicator does not appear in the status bar and the **Active Microphone** field in the **System Information** page reports *Microphone In* as the active microphone.

Attaching the Avaya Video MicPod 1000 Strain Relief Clip

If the Avaya Video MicPod 1000 is installed in an area where you could pull or trip over the cord, Avaya recommends using the strain relief clip included with your Avaya Video MicPod 1000 to reduce the chance of disconnecting or damaging the plug or the system codec.

Ensure that the codec surface is clean (free of dirt, dust, oil, and other residues) and dry. The adhesive tape on the strain relief clip is intended for a single use. Attach the strain relief clip to the codec and route the Avaya Video MicPod 1000 cable through the strain relief clip as shown in the following illustration.



To obtain a replacement strain relief clip, contact Avaya.

Troubleshooting Installation Issues

Installation issues that you may encounter with your Avaya system typically involve improperly connected cables, network bandwidth or connectivity. For more information about troubleshooting issues you may encounter with Avaya systems, refer to the *Avaya Video Communications Systems User and Administrator Guide*.

Loose Cables

Improperly connected or loose cables are common causes of problems with hardware units. When investigating a system problem, inspect the external controls and cable connections. Ensure that connections are correct and secure and that nothing is obstructing the cables.

Blank or Distorted Display

If your screen image is distorted and unusable or the display is blank, you can configure the display from the web administration interface. Follow these steps:

1. Enter the IP address of your system in a browser.

   NOTE Ignore any warnings on security certificates.

2. Navigate to **Preferences : Appearance : Displays**
3. For **Display 1 Resolution**, select *Auto*.
4. Select **Save Changes** and **Log out**.

No Power

To troubleshoot a power problem, complete the following steps:

1. Disconnect the power supply unit (PSU) from the Avaya codec and the AC source.
2. Plug a working appliance into the AC source to determine if the source is functioning.
3. If the AC source works, plug the PSU into the AC source, but do not connect the PSU to the Avaya codec. If the green LED on the PSU illuminates, the PSU is probably functioning.
4. Disconnect the PSU from the AC source. Connect the PSU to the Avaya codec. Reconnect the PSU to the AC source. If the Avaya codec fails to boot and the green LED on the PSU dims, the codec may be the source of the problem.

IP Address Displays Invalid Value

If the IP address that appears at the top of the main screen displays an invalid value after you complete the initial configuration, one of the following conditions may exist:

Condition	Resolution
The unit is configured to obtain an address using DHCP and no DHCP server is available. **Note:** The DHCP client self-assigns an address in the 169.254 class B network and the red network symbol appears in the status bar on the main screen.	Verify that the unit is plugged into a network that has a DHCP server present.
Faulty Ethernet cable connection.	Replace the Ethernet cable with a high quality cable.
The unit is configured to use a static IP address, but no IP address has been entered.	Identify and enter the necessary IP information.
Network connection is unavailable. A red network symbol appears in the status bar on the main screen.	Inspect your network connection.

Camera Issues

Video from the camera appears in a small window on the main screen of the user interface above the **Redial** list. If no video from the camera appears, do the following:

- Ensure that the camera is properly connected to the Avaya codec as described in Installing Your System.
- Verify that the blue LED on the front of the camera is lit and not blinking.
- From the main screen of the user interface, press to access the **System Menu**. Press to access page 2 of the **System Information** page. Ensure that the status of the camera is **Ready**.
- Ensure that the primary input is set to the high definition camera. Press . If **Primary Input : HD Camera** does not appear at the top of the screen, press to display the **Primary Input** selection dialog. Use the arrow keys on the remote control to select the appropriate high definition camera and press **OK**.

Improving a Dim Image

Adjust the **HD Camera Brightness** preference in **Diagnostics : High Definition Camera**. You can also add a light source to improve the subject's illumination. Read more at Room Configuration.

Attached Video Input Device Not Working

When you connect a video input device that has capabilities not supported by an Avaya system, the status **Out of range** appears on the **System Information** page for that input. The device may be in a mode that the codec does not support. If changing the mode does not help, the device is not supported.

Status Icons

The following table identifies the icons that can appear in the system status bar.

Icon	Condition
	Indicates that the communication subsystem is initializing. If this icon reappears after the system has booted, a problem has occurred. Reboot the system.
	Indicates that the system is initializing. When the system is initializing, functionality on the main screen is disabled and no entries appear in the REDIAL list. This icon also appears when a new device is connected to the system after the system boots and disappears when the device is ready. If the icon persists, a problem has occurred and rebooting the system is necessary.
	Indicates that the connected phone has been detected and the phone is initializing. If the icon persists, a problem has occurred and rebooting the system is necessary.
	Indicates that the system does not have an active microphone. Check the device's connections and then check the option you selected for the **Active Microphone** preference.
Network Status 	Identifies the network status, as follows: connected (green indicator) in progress (yellow indicator) disconnected (red indicator)
 	Indicates the status of the registration process with the SIP server. The yellow SIP icon appears when your Avaya system is trying to register with the SIP server. If the registration fails, the red SIP icon appears.
System Overheating 	The yellow indicator warns you when the system temperature is above normal operating temperature. The codec adjusts fan speed automatically to cool itself. The red indicator warns that the system is overheated and approaching the maximum allowed operating temperature where it will automatically reboot. **Warning**: Temperatures that require the codec to reboot can permanently damage codec components. Ensure that the room that houses the codec is properly ventilated and temperature controlled.

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